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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/294,259	04/19/99	MARGULIS N	PA1031US

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EXAMINER	
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ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/294,259	NEAL MARGULIS
Examiner	**Group Art Unit**
Trang U.Tran	2614

☒ Responsive to communication(s) filed on *Sep 11, 2000*

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) *50-97* is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *50-97* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____ .

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). *13*

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 50-97 have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 50-97 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, 6, 23-24 and 26 of U.S. Patent No. 6,157,396. Although the conflicting claims are not identical, they are not patentably distinct from each other because

In consider claim 1, claims 1 and 3 of U.S. Patent 6,157,396 recites all the claimed subject matter, note 1) a display input processor (DIP) coupled to a databus, said DIP comprising an input data connector and a first plurality of processing modules configured to receive bitstream data input and reconstruct said input to generate DIP outputs (claim 1 of U.S. Patent 6,157,396), 2) a display output processor (DOP) coupled to said databus, said DOP comprising a second plurality of processing modules configured to process said DIP outputs for generating DOP outputs, said second plurality comprising a geometric transformation (GT) module and a post GT filtering module (claim 1 and claim 3 of U.S. Patent 6,157,396); and a buffer memory, coupled to said databus, configured to store said DIP outputs and said DOP outputs, and to provide said video stream image data to said display device (claim 1 of U.S. Patent 6,157,396). It is noted that claim 1 of this application is broader than and encompass claim 1 and claim 3 of U.S. Patent 6,157,396 or it is merely considered as well known design options obvious to one of ordinary skill in the art because eliminating of an element and its function provides no significant functional or patentable differences. In re Karlson, 153 USPQ 184 (CCPA 1963).

In consider claim 51, the claimed wherein said DOP comprises a display map memory (DMM) is recited in claim 2 of U.S. Patent 6,157,396. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the DMM of claim 2 of U.S. Patent 6,157,396 into claims 1 and 3 of U.S. Patent 6,157,396 in order to increase the quality of the video signal to be displayed.

In consider claim 52, claim 1 and claim 3 of U.S. Patent 6,157,396 do not specifically recite wherein said DMM is configured to store system configuration information which includes intensity values for setup of said display device. The capability of storing system configuration information which includes intensity values for setup of the display device is old and well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known capability of setting up the display device by using the stored system configuration information which includes intensity values in order to increase the quality of the video signal to be displayed.

In consider claim 53, claim 1 and claim 3 of U.S. Patent 6,157,396 do not recite the claimed wherein the geometric transformation (GT) module is configured to geometrically transform said DIP inputs. It would have been obvious to one of ordinary skill in the art at the time of the invention to geometrically transforming the DIP inputs in order to display the video signal inputted to the DIP.

In consider claim 54, claim 1 and claim 3 of U.S. Patent 6,157,396 do not specifically disclose wherein said GT module comprises a spatial transformation module configured to redefine spatial relationships between image pixels; an alignment and rotation correction module configured to reposition image pixels; a focus correction module configured to correct image defocus; and a distortion correction module configured to correct image distortions. The spatial transformation module, the alignment and rotation correction module, the focus correction module, and the distortion correction module are well known and old in the art. It would have

been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known spatial transformation module, alignment and rotation correction module, focus correction module, and distortion correction module into claim 1 and claim 3 of U.S. Patent 6,157,396 in order to increase the quality of the video signal to be displayed.

In consider claim 55, claim 1 and claim 3 of U.S. Patent 6,157,396 do not specifically disclose that the alignment and rotation correction module is configured to rotate images. It would have been obvious to one of ordinary skill in the art at the time of the invention to rotate images by using the alignment and rotation correction module in order to increase the quality of the images to be displayed.

In consider claim 56, claim 1 and claim 3 of U.S. Patent 6,157,396 do not specifically disclose that the focus correction module is configured to correct said image for defocus resulting from image deformation and from display optics. It would have been obvious to one of ordinary skill in the art at the time of the invention to correct said image for defocus resulting from image deformation and from display optics by using the focus correction module in order to increase the quality of the images to be displayed.

In consider claim 57, it would have been obvious to one of ordinary skill in the art at the time of the invention to increase image resolution by using the spatial transformation module in order to increase the quality of the images to be displayed.

In consider claim 58, it would have been obvious to one of ordinary skill in the art at the time of the invention to select motion tracking information from either a compressed bitstream or a motion estimator output in order to increase the quality of the images to be displayed.

In consider claim 59, it would have been obvious to one of ordinary skill in the art at the time of the invention to improve skew, tangential symmetry, aspect angle, and scale-related distortion of the display images by using the GT module in order to increase the quality of the images to be displayed.

In consider claim 60, it would have been obvious to one of ordinary skill in the art at the time of the invention to correct environment-introduced image artifacts by using the GT module in order to increase the quality of the images to be displayed.

In consider claim 61, it would have been obvious to one of ordinary skill in the art at the time of the invention to correct artifacts resulting from non-uniformity of the display device by using the GT module in order to increase the quality of the images to be displayed.

In consider claim 62, claim 1 and claim 3 of U.S. Patent 6,157,396 do not specifically disclose wherein said GT module comprises a texture mapping module. The texture mapping module is old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the texture mapping module into claim 1 and claim 3 of U.S. Patent 6,157,396 in order to increase the video signal to be displayed.

In consider claim 63, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a mathematical formula for providing DOP outputs suitable for a

panoramic projection by using the DOP in order to increase the quality of the images to be displayed.

In consider claim 64, it would have been obvious to one of ordinary skill in the art at the time of the invention to perform transitions for multi-picture displays by using the texture mapping module in order to increase the quality of the images to be displayed.

In consider claim 65, claim 1 and claim 3 of U.S. Patent 6,157,396 do not specifically disclose wherein said GT module comprises a multi-frame correlation module. The multi-frame correlation module is old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the multi-frame correlation module into claim 1 and claim 3 of U.S. Patent 6,157,396 in order to increase the video signal to be displayed.

In consider claim 66, it would have been obvious to one of ordinary skill in the art at the time of the invention to select motion compensation information from either a selected display image or a motion estimator output in order to increase the quality of the images to be displayed.

In consider claim 67, claim 1 and claim 3 of U.S. Patent 6,157,396 do not specifically disclose wherein said DIP is configured to receive data as a coded bitstream, said bitstream comprising image object information, image object depths, and image motion tracking information. It is noted that coded bitstream comprising image object information, image object depths, and image motion tracing information is old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well

known coded bitstream into claim 1 and claim 3 of U.S. Patent 6,157,396 in order to improve the quality and to display of the coded bitstream.

Claim 68 is rejected for the same reasons as discussed in claim 63.

Claim 69 is rejected for the same reasons as discussed in claims 55 and 63.

In consider claim 70, claim 1 and claim 3 of U.S. Patent 6,157,396 do not specifically disclose that the output image data to film. The capability of recording image data on film is old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to record the output image data on film in order to store the image data for later use.

In consider claim 71, claim 1 and claim 3 of U.S. Patent 6,157,396 do not specifically disclose to receive a coded input that represents tow images and use said coded input to present a 3D stereoscopic image on said display device. The capability displaying 3D stereoscopic image is old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known displaying 3D stereoscopic into claim 1 and claim 3 of U.S. Patent 6,157,396 in order to improve the quality and to display of the coded bitstream.

In consider claim 72, claim 1 and claim 3 of U.S. Patent 6,157,396 do not specifically disclose to simultaneously receive multiple video streams and process such streams to provide an image from each video stream in a single display using Picture-in-Picture and windowing controls. The capability displaying two video signals in a single display using Picture-in-Picture

and windowing controls is old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known displaying two video signals into claim 1 and claim 3 of U.S. Patent 6,157,396 in a single display using Picture-in-Picture in order to allow user to watch two video signals at the same time.

In consider claim 73, it would have been obvious to one of ordinary skill in the art at the time of the invention to perform transition effects between the different video streams, such transition effect including fades, blends, wipes and warps by using the BT module in order to increase the quality of the images to be displayed.

In consider claim 74, claim 1 and claim 3 of U.S. Patent 6,157,396 do not specifically disclose wherein said DIP comprises an image reconstruction module configured for performing multiframe reconstruction to increase image resolutions. The capability to increase image resolutions by using an image reconstruction module for performing multiframe reconstruction is old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known image reconstruction module into claim 1 and claim 3 of U.S. Patent 6,157,396 in order to increase the quality of the video signal to be displayed.

In consider claim 75, claim 1 and claim 3 of U.S. Patent 6,157,396 do not specifically disclose wherein said multiframe reconstruction module is configured to use motion estimation vectors from an input bitstream to correlate multiple images. Claim 6 of U.S. Patent 6,157,396 teaches that the image reconstruction module comprises a motion estimator. It would have been

obvious to one of ordinary skill in the art at the time of the invention to incorporate claim 6 of U.S. Patent 6,157,396 into claim 1 and claim 3 of U.S. Patent 6,157,396 in order to increase the quality of the video signal to be displayed.

In consider claim 76, claim 1 and claim 3 of U.S. Patent 6,157,396 do not specifically disclose a temporal gamma processing TGP module coupled to said display device, said TGP module configured to determine an output intensity value for each color component output to display device. The capability of using a temporal gamma processing TGP module to determine an output intensity value for each color component output to said display device is old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known temporal gamma processing TGP module into claim 1 and claim 3 of U.S. Patent 6,157,396 in order to increase the quality of the video signal to be displayed.

In consider claim 77, claim 1 and claim 3 of U.S. Patent 6,157,396 do not specifically disclose the temporal gamma processing TGP module comprising a plurality of look-up tables, wherein said TGP is configured to use at least one of said plurality of table s for determining color correction. The capability of using a plurality of look-up tables for determining color correction is also old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known plurality of look-up tables into claim 1 and claim 3 of U.S. Patent 6,157,396 in order to increase the quality of the video signal to be displayed.

Claim 78 is rejected for the same reasons as discussed in claim 54.

Claim 79 is rejected for the same reasons as discussed in claim 54.

Claim 80 is rejected for the same reasons as discussed in claim 54.

Claim 81 is rejected for the same reasons as discussed in claim 54.

Claim 82 is rejected for the same reasons as discussed in claim 65.

Claim 83 is rejected for the same reasons as discussed in claim 59.

In consider claim 84, claims 23-24 and 26 of U.S. Patent 6,157,396 recites all the claimed subject matter, note 1) receiving said bitstream information into a display input processor (DIP) (claim 23 of U.S. Patent 6,157,396), 2) processing said received bitstream information to generate DIP outputs (claim 23 and claim 3 of U.S. Patent 6,157,396), 3) the claimed receiving said DIP outputs into a display output processor (DOP) (claim 23 of U.S. Patent 6,157,396), 4) the claimed processing said DIP outputs with a geometric transformation (GT) module to generate DOP outputs (claim 23 of U.S. Patent 6,157,396), 5) the claimed directing said DOP outputs to a buffer memory module (claim 26 of U.S. Patent 6,157,396) and 6) the claimed providing images based on said DOP outputs to said display device (claim 23 of U.S. Patent 6,157,396). It is noted that claim 84 of this application is broader than and encompass claims 23-24 and claim 26 of U.S. Patent 6,157,396 or it is merely considered as well known design options obvious to one of ordinary skill in the art because eliminating of an element and its function provides no significant functional or patentable differences. In re Karlson, 153 USPQ 184 (CCPA 1963).

Claim 85 is rejected for the same reasons as discussed in claim 54.

Claim 86 is rejected for the same reasons as discussed in claim 54.

Claim 87 is rejected for the same reasons as discussed in claim 54.

Claim 88 is rejected for the same reasons as discussed in claim 54.

Claim 89 is rejected for the same reasons as discussed in claim 54.

Claim 90 is rejected for the same reasons as discussed in claim 65.

Claim 91 is rejected for the same reasons as discussed in claim 59.

Claim 92 is rejected for the same reasons as discussed in claim 75.

In consider claim 93, claims 23-24 and 26 of U.S. Patent 6,157,396 do not specifically disclose wherein utilizing motion estimation vectors comprises processing until sub-block motion estimation is discerned. The capability of estimating motion vectors by using sub-block motion estimator is old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known sub-block motion estimator into claims 23-24 and 26 of U.S. Patent 6,157,396 in order to increase the quality of the video signal to be displayed.

In consider claim 94, claims 23-24 and 26 of U.S. Patent 6,157,396 do not specifically disclose wherein utilizing motion estimation vectors comprises using enhance matching processing techniques which include rotation, scale and sheer techniques. The capability of estimating motion vectors by using enhanced matching processing techniques which include rotation, scale and sheer techniques is old and well known in the art. It would have been obvious

to one of ordinary skill in the art at the time of the invention to incorporate the well known matching processing techniques which include rotation, scale and sheer techniques into claims 23-24 and 26 of U.S. Patent 6,157,396 in order to increase the quality of the video signal to be displayed.

In consider claim 95, claims 23-24 and 26 of U.S. Patent 6,157,396 do not specifically disclose wherein processing with an image reconstruction module comprises processing bitstream information comprising multiple image from multiple cameras. The capability of inputting video signals using multiple cameras is old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known cameras into claims 23-24 and 26 of U.S. Patent 6,157,396 in order to insult in a more versatile system by selecting different input video signals from different input devices.

Claim 96 is rejected for the same reasons as discussed in claim 76.

In consider claim 97, claims 23-24 and 26 of U.S. Patent 6,157,396 do not specifically disclose wherein utilizing a TGP module to determine an intensity value comprises utilizing a desired intensity value and a previous frame intensity value. The capability of determining an intensity value using a desired intensity value and a previous frame intensity value is old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known determining the intensity value using the desired intensity value and a previous frame intensity value into claims 23-24 and 26 of U.S. Patent

6,157,396 in order to insult in a more versatile system by selecting different input video signals from different input devices.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

5. Claims 50-72, 74-93 and 95-97 are rejected under 35 U.S.C. 102(e) as being anticipated by Margulis et al (U.S. Patent 6,157,396).

In consider claim 1, Margulis et al discloses all the claimed subject matter, note 1) the claimed a display input processor (DIP) coupled to a databus, said DIP comprising an input data connector and a first plurality of processing modules configured to receive bitstream data input and reconstruct said input to generate DIP outputs is met by the DIP 210 (Fig. 3, col. 6, line 53 to col. 7, line 19, 2) the claimed a display output processor (DOP) coupled to said databus, said DOP comprising a second plurality of processing modules configured to process said DIP outputs for generating DOP outputs, said second plurality comprising a geometric transformation (GT) module and a post GT filtering module is met by the DOP 230 (Fig. 4, col. 13, lines 35-47), and 3) the claimed a buffer memory, coupled to said databus, configured to store said DIP

outputs and said DOP outputs, and to provide said video stream image data to said display device is met by the buffer memory 240 (Fig. 2, col. 6, lines 31-32).

In consider claim 51, the claimed wherein said DOP comprises a display map memory (DMM) is met by the display map memory (DMM) 402 (Fig. 4, col. 13, lines 35-36.

In consider claim 52, the claimed wherein said DMM is configured to store system configuration information which includes intensity values for setup of said display device is met by the display map memory (DMM) 402 (Fig. 4, col. 14, lines 6-30).

In consider claim 53, the claimed wherein the geometric transformation (GT) module is configured to geometrically transform said DIP inputs is met by the geometric transformation 404 (Fig. 4, col. 14, lines 31-48).

In consider claim 54, the claimed wherein said GT module comprises a spatial transformation module configured to redefine spatial relationships between image pixels is met by the spatial transformation 502 (Fig. 5, col. 18, lines 8-26); an alignment and rotation correction module configured to reposition image pixels is met by the alignment and rotation correction 506 (Fig. 5, col. 18, lines 27-39); a focus correction module configured to correct image defocus is met by the focus correction 508 (Fig. 5, col. 18, lines 40-58); and a distortion correction module configured to correct image distortions is met by the distortion correction 510 (Fig. 5, col. 18, lines 59-67).

In consider claim 55, the claimed wherein said alignment and rotation correction module is configured to rotate images is met by the alignment/rotation correction 506 (Fig. 5, col. 18, lines 27-39).

In consider claim 56, the claimed wherein said focus correction module is configured to correct said image for defocus resulting from image deformation and from display optics is met by the geometric transformation 404 (Fig. 4, col. 15, lines 6-34).

In consider claim 57, the claimed wherein said spatial transformation module is configured to use frame information and motion tracking information from multiple input to increase image resolution is met by col. 23, lines 39-49.

In consider claim 58, the claimed wherein said spatial transformation module is configured to select motion tracking information from either a compressed bitstream or a motion estimator output is met by col. 23, lines 39-49).

In consider claim 59, the claimed wherein said GT module is configure to improve skew, tangential symmetry, aspect angle, and scale-related distortion of the display images is met by col. 18, lines 27-29.

In consider claim 60, the claimed wherein said GT module is configured to correct environment-introduced image artifacts is met by col. 23, liens 19-38.

In consider claim 61, the claimed wherein said GT module is configured to correct artifacts resulting from non-uniformity of the display device is met by col. 23, lines 19-38.

In consider claim 62, the claimed wherein said GT module comprises a texture mapping module is met by col. 15, line 63 to col. 16, line 8.

In consider claim 63, the claimed wherein said DOP is configured to use a mathematical formula for providing DOP outputs suitable for a panoramic projection is met by col. 15, lines 6-34 and col. 23, lines 19-67.

In consider claim 64, the claimed wherein said module is configured to use texture mapping to perform transitions for multi-picture displays is met by col. 15, line 63 to col. 16, line 8.

In consider claim 65, the claimed wherein said GT module comprises a multi-frame correlation module is met by the multiframe correlation 514 (Fig. 5, col. 19, lines 21-46).

In consider claim 66, the claimed wherein said multi-frame correlation module is configured to select motion compensation information from either a selected display image or a motion estimator is met by col. 19, lines 36-46.

In consider claim 67, the claimed wherein said DIP is configured to receive data as a coded bitstream, said bitstream comprising image object information, image object depths, and image motion tracking information is met by col. 11, lines 23-43.

In consider claim 68, the claimed image data for a 3D and/or a panoramic display device is met by col. 23, lines 19-38.

In consider claim 69, the claimed to use said image object information to reposition objects in output coordinates of the panoramic display device is met by col. 11, lines 23-43.

In consider claim 70, the claimed wherein the output image data to film is met by col. 16, lines 1-8.

In consider claim 71, the claimed to receive a coded input that represents tow images and use said coded input to present a 3D stereoscopic image on said display device is met by col. 16, lines 26-32.

In consider claim 72, the claimed receiving multiple video streams and process such streams to provide an image from each video stream in a single display using Picture-in-Picture and windowing controls is met by col. 7, lines 16-19.

In consider claim 74, the claimed wherein said DIP comprises an image reconstruction module configured for performing multiframe reconstruction to increase image resolutions is met by the image reconstruction 318 (Fig. 3, col. 13, lines 22-33).

In consider claim 75, the claimed wherein said multiframe reconstruction module is configured to use motion estimation vectors from an input bitstream to correlate multiple images is met by col. 13, lines 3-21 and col. 19, lines 36-46.

In consider claim 76, Margulis et al discloses all the claimed invention, note 1) the claimed a display device, coupled to said display system, for viewing image data is met by the display screen 260 (Fig. 2, col. 6, lines 20-35), 2) the claimed a geometric transformation GT module coupled to said display device, said GT module configured to precondition said bitstream data using geometric transformations to compensate for characteristics of said display device is met by the geometric transformation 404 (Fig. 4, col. 14, line 30 to col. 16, line 32) and 3) the

claimed a temporal gamma processing TGP module coupled to said display device, said TGP module configured to determine an output intensity value for each color component output to display device is met by the temporal gamma processing 412 (Fig. 2, Fig. 6 and col. 19, line 48 to col. 20, line 23).

In consider claim 77, the claimed the temporal gamma processing TGP module comprising a plurality of look-up tables, wherein said TGP is configured to use at least one of said plurality of table s for determining color correction is met by col. 19, line 48 to col. 20, line 23.

Claim 78 is rejected for the same reasons as discussed in claim 54.

Claim 79 is rejected for the same reasons as discussed in claim 54.

Claim 80 is rejected for the same reasons as discussed in claim 54.

Claim 81 is rejected for the same reasons as discussed in claim 54.

Claim 82 is rejected for the same reasons as discussed in claim 65.

Claim 83 is rejected for the same reasons as discussed in claim 59.

The method claim 84 is rejected for the same reasons as discussed in the apparatus claim 50.

Claim 85 is rejected for the same reasons as discussed in claim 54.

Claim 86 is rejected for the same reasons as discussed in claim 54.

Claim 87 is rejected for the same reasons as discussed in claim 54.

Claim 88 is rejected for the same reasons as discussed in claim 54.

Claim 89 is rejected for the same reasons as discussed in claim 54.

Claim 90 is rejected for the same reasons as discussed in claim 65.

Claim 91 is rejected for the same reasons as discussed in claim 59.

Claim 92 is rejected for the same reasons as discussed in claim 75.

In consider claim 93, the claimed wherein utilizing motion estimation vectors comprises processing until sub-block motion estimation is discerned is met by the motion estimator 3180 (Fig. 3, col. 13, lines 3-21).

In consider claim 95, the claimed wherein processing with an image reconstruction module comprises processing bitstream information comprising multiple image from multiple cameras is met by col. 16, lines 9-17.

In consider claim 96, the claimed wherein processing said DIP output comprises utilizing a temporal gamma processing (TGP) module to determine, for each color component, an intensity value to output to said display device is met by the temporal gamma processing 412 (Fig. 2, Fig. 6 and col. 19, line 48 to col. 20, line 23).

In consider claim 97, the claimed wherein utilizing a TGP module to determine an intensity value comprises utilizing a desired intensity value and a previous frame intensity value is met by col. 19, line 48 to col. 20, line 23.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 73 and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margulis et al (U.S. Patent 6,157,396) in view of Official Notice.

In consider claim 73, Margulis et al discloses all the features of the instant invention (see the rejection of claim 72 above) except for providing that wherein said GT module is configured to perform transition effects between the different video streams, such transition effect including fades, blends, wipes and warps. The capability of editing video signals by fading, blending, wiping and warping the video signals is old and well known in the art and therefore Official Notice is taken.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known capability of editing video signal using fading, blending, wiping and warping into Margulis et al's system in order to improve the quality of the video signals to be displayed.

In consider claim 94, Margulis et al discloses all the features of the instant invention (see the rejection of claim 92 above) except for providing that the utilizing motion estimation vectors comprises using enhanced matching processing techniques which include rotation, scale and

sheer techniques. The capability of using matching processing techniques which include rotation, scale and sheer techniques is also well known and old in the art and therefore Official Notice is again taken.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known enhanced matching processing techniques which include rotation, scale and sheer techniques into Margulis et al in order to increase the quality of the video signal to be displayed.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang Tran whose telephone number is (703) 305-0090.The examiner can normally be reached on Monday to Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reinhard J. Eisenzopf, can be reached on (703)305-4711.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-6306, (for formal communications intended for entry)

Or:

(703) 308-6296 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

TT TT

January 28, 2001

REINHARD J. EISENZOPF 1-29-01
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600